

---

UNITED STATES  
SECURITIES AND EXCHANGE COMMISSION  
WASHINGTON, D.C. 20549

**FORM 6-K**

**REPORT OF FOREIGN PRIVATE ISSUER  
PURSUANT TO RULE 13a-16 OR 15d-16 OF  
THE SECURITIES EXCHANGE ACT OF 1934**

For the month of **September 2020**

Commission File Number: **001-36187**

**EVOGENE LTD.**

(Translation of Registrant's Name into English)

**13 Gad Feinstein Street  
Park Rehovot P.O.B 2100  
Rehovot 7612002 Israel**  
(Address of principal executive offices)

Indicate by check mark whether the registrant files or will file annual reports under cover of Form 20-F or Form 40-F.

Form 20-F  Form 40-F

Indicate by check mark if the registrant is submitting the Form 6-K in paper as permitted by Regulation S-T Rule 101(b)(1): \_\_\_\_\_

Indicate by check mark if the registrant is submitting the Form 6-K in paper as permitted by Regulation S-T Rule 101(b)(7): \_\_\_\_\_

---

## CONTENTS

On September 8, 2020, Evogene Ltd., or Evogene, announced positive pre-clinical results in the immuno-oncology program of its subsidiary, Biomica Ltd., or Biomica. A copy of the press release is furnished as [Exhibit 99.1](#) to this Report of Foreign Private Issuer on Form 6-K, or this Form 6-K, and is incorporated herein by reference

The contents of Exhibit 99.1 to this Form 6-K, excluding the statements of Biomica's chairman and CEO contained therein, are incorporated by reference in the registration statements on Form F-3 (Securities and Exchange Commission ("SEC") File No. 333-240249, filed with the SEC on July 31, 2020), and Form S-8 (SEC File No.'s 333-193788, 333-201443 and 333-203856, filed with the SEC on February 6, 2014, January 12, 2015 and May 5, 2015, respectively) of Evogene, and will be a part thereof from the date on which this Form 6-K is submitted, to the extent not superseded by documents or reports subsequently filed or furnished.

## EXHIBIT INDEX

### Exhibit No.

99.1

[Press Release: Biomica Announces Positive Pre-Clinical Results in its Immuno-Oncology Program](#)

SIGNATURE

Pursuant to the requirements of the Securities Exchange Act of 1934, the Registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized.

EVOGENE LTD.  
(Registrant)

Date: September 8, 2020

By: /s/ Dorit Kreiner

Dorit Kreiner  
Chief Financial Officer



### **Biomica Announces Positive Pre-Clinical Results in its Immuno-Oncology Program**

Biomica's, a subsidiary of Evogene Ltd., live biotherapeutic drug candidate BMC128 administered in combination with Immune Checkpoint Inhibitors (ICI) significantly improved anti-tumor activity. Proof-of-concept first-in-man studies expected next year

**Rehovot, Israel – September 8, 2020** – Biomica Ltd., an emerging biopharmaceutical company developing innovative microbiome-based therapeutics, and a subsidiary of Evogene Ltd. (NASDAQ: EVGN, TASE: EVGN), today announced positive pre-clinical in-vivo results in its immuno-oncology program for a follow-on combination of bacterial strains. In these studies, Biomica tested BMC128, which consists of four live bacterial strains derived from Biomica's drug candidates BMC121 and BMC127. Treatment with BMC128, both prior to and in combination with ICI, significantly improved anti-tumor activity in mice.

These positive results supplement additional positive data using Biomica's initial bacterial strain combinations BMC121 and BMC127, which demonstrated anti-tumor activity in animal studies. BMC128 was selected based on further predictive analysis of the results of Biomica's studies with BMC121 and BMC 127.

Biomica's immuno-oncology program is based on the premise that the gut microbiome affects the efficacy of cancer immunotherapy, specifically that of the ICI involving the blockade of PD-1 or PD-L1 and CTLA-4, as suggested in scientific literature.<sup>1</sup> In the current study, BMC128 was administered to mice bearing cancer tumors prior to and during ICI therapy. BMC128 is a rationally-designed microbial consortium derived from Biomica's earlier candidates BMC121 and BMC127, which had been identified and selected through a detailed functional microbiome analysis using PRISM, a proprietary high-resolution microbiome analysis platform powered by Evogene's MicroBoost AI platform.

---

<sup>1</sup> Zitvogel et al. 2018, Science 359 (6382)

Biomica's current results demonstrate that treatment with BMC128 prior to and in combination with the administration of ICI, significantly reduced tumor volume and increased animal survival compared to ICI therapy alone. Moreover, treatment with BMC128 affected several immunological factors, including specific immune-cells populations known to be involved in tumor destruction.<sup>2</sup>

The study indicates that treatment with BMC128 conditions the immune system and primes it for an efficient, well-orchestrated anti-tumor response. This is in-line with numerous scientific publications, demonstrating the effect of the gut microbiome on the response to ICI, and more specifically a reduced response to ICI in patients with compromised microbiome following treatment with antibiotics.<sup>3</sup>

As previously disclosed, Biomica has initiated scale-up processes for Good Manufacturing Practice (GMP) production of its drug candidates in its immuno-oncology program in preparation for the expected first-in-man proof-of-concept clinical trials next year, following expected additional pre-clinical studies during 2020.

**Dr. Elran Haber, CEO of Biomica stated:** "We are very excited with the results of this study using BMC128, which demonstrate the potential of Biomica's drug candidates in improving care for cancer patients treated with immunotherapy. We believe these results indicate that live biotherapeutic drugs may potentially be used as a stand-alone priming therapy or as combination therapy with ICI in order to improve the response of cancer patients. We look forward to providing incremental updates as we work towards first-in-man proof-of-concept clinical trials."

**Ofer Haviv, Chairman of Biomica and Evogene's President and CEO stated:** "I am very proud of Biomica's rapid progress. We believe that these pre-clinical results are a clear demonstration of the advantages that can be provided by predictive biology, powered by big data analysis and artificial intelligence, for increasing the efficacy of immunotherapy. In addition, we believe that this success underpins the broad applicability of Evogene's unique Computational Predictive Biology (CPB) platform in multiple major market areas."

#### **About BMC121, BMC127 and BMC128**

Developed as Live Bacterial Products (LBPs), BMC121 and BMC127 are rationally-designed LBP consortia comprised of unique bacterial strains, natural inhabitants of the human intestinal tract, that harbor specific functional capabilities with the potential to enhance immunological therapeutic responses and facilitate anti-tumor immune activity through multiple biological processes.

---

<sup>2</sup> Zitvogel et al. 2018, Science 359 (6382); Hsu J, et al. Contribution of NK cells to immunotherapy mediated by PD-1/PD-L1 blockade. J Clin Invest. 2018;128(10):4654-4668. doi:10.1172/JCI99317

<sup>3</sup> Thompson J, Szabo A, Arce-Lara C, et al: Microbiome & immunotherapy: Antibiotic use is associated with inferior survival for lung cancer patients receiving PD-1 inhibitors. J Thorac Oncol 12 (suppl 2):S1998, 2017

---

Rationally-designed consortia are multi-strain products designed to restore diversity and specific functionality to a host's microbial community with individually selected, cultured bacteria.

BMC128 consists of four bacterial strains derived from Biomica's drug candidates BMC121 and BMC127

\*\*\*

**About Biomica:**

Biomica is an emerging biopharmaceutical company developing innovative microbiome-based therapeutics utilizing a dedicated Computational Predictive Biology platform (CPB), licensed from Evogene. Biomica aims to identify and characterize disease-related microbiome entities and to develop novel therapeutics based on these understandings. The company is focused on the development of therapies for antibiotic resistant bacteria, immuno-oncology, and microbiome-related gastrointestinal (GI) disorders.

Biomica is a subsidiary of Evogene Ltd. (NASDAQ, TASE: EVGN). For more information, please visit [www.biomicamed.com](http://www.biomicamed.com).

**About Evogene Ltd.:**

**Evogene** (NASDAQ: EVGN, TASE: EVGN.TA) is a leading computational biology company focused on revolutionizing product discovery and development in multiple life-science based industries, including human health and agriculture, through the use of our broadly applicable Computational Predictive Biology (CPB) platform. The CPB platform, incorporating a deep understanding of biology leveraged through the power of Big Data and Artificial Intelligence, has been designed to computationally discover and uniquely guide the development of life-science products based on microbes, small molecules and genetic elements. Utilizing the CPB platform, Evogene and its subsidiaries are now advancing product pipelines for human microbiome-based therapeutics through Biomica Ltd., medical cannabis through Canonic Ltd., ag-biologicals through Lavie Bio Ltd., ag-chemicals through AgPlenus Ltd., and ag-solutions for castor oil production through Casterra Ltd. For more information, please visit [www.evogene.com](http://www.evogene.com)

---

## **Forward Looking Statements**

*This press release contains "forward-looking statements" relating to future events. These statements may be identified by words such as "may", "could", "expects", "intends", "anticipates", "plans", "believes", "scheduled", "estimates" or words of similar meaning. For example, Biomica and Evogene are using forward-looking statements in this press release when they discuss the potential benefits of live therapeutic drugs, the potential advantages of predictive biology, the broad applicability of the CPB platform and the expected first-in-man proof-of-concept clinical trials and the timing thereof. Such statements are based on current expectations, estimates, projections and assumptions, describe opinions about future events, involve certain risks and uncertainties which are difficult to predict and are not guarantees of future performance. Therefore, actual future results, performance or achievements of Evogene and its subsidiaries may differ materially from what is expressed or implied by such forward-looking statements due to a variety of factors, many of which are beyond the control of Evogene and its subsidiaries, including, without limitation, the global spread of COVID-19, or the Coronavirus, the various restrictions deriving therefrom and those risk factors contained in Evogene's reports filed with the applicable securities authorities. In addition, Evogene and its subsidiaries rely, and expect to continue to rely, on third parties to conduct certain activities, such as their field-trials and pre-clinical studies, and if these third parties do not successfully carry out their contractual duties, comply with regulatory requirements or meet expected deadlines (including as a result of the effect of the Coronavirus), Evogene and its subsidiaries may experience significant delays in the conduct of their activities. Evogene and its subsidiaries disclaim any obligation or commitment to update these forward-looking statements to reflect future events or developments or changes in expectations, estimates, projections and assumptions.*

### **Contact:**

Rivka Neufeld  
Investor Relation and Public Relations Manager  
E: IR@evogene.com  
T: +972-8-931-1940

### **US Investor Relations:**

Joseph Green  
Edison Group  
E: jgreen@edisongroup.com  
T: +1 646-653-7030

Laine Yonker  
Edison Group  
E: lyonker@edisongroup.com  
T: +1 646-653-7035

---